

# Work Order ID 68302

Monday, April 11, 2011 1:20:04 PM



Page 1

Item ID: D4154-1

Accept



Setup Start



Revision ID:

Item Name: Plate

Stop



Start Date: 4/11/2011 Start Qty: 6.00



Cust Item ID:

Required Date: 4/15/2011 Req'd Qty: 6.00



Customer:

Reference:

Approvals:

Process Plan:

*[Signature]*

Date: 4/11/11

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

Rev

D4154

~~XNR~~

11.04.12

B

100

0.00



Waterjet

FLOW CNC Waterjet

Memo

1-Cut as per Dwg

Dwg Rev: B

Prog Rev: B

2-Deburr if necessary

0.00

611-4-14

②

110

QC2- Inspect parts off machine FAI/FAIB

0.00



QC

Quality Control

Memo

0.00

611-4-14

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 68302**

Monday, April 11, 2011 1:20:04 PM



Page 2

Item ID: D4154-1

Accept



Setup Start



Revision ID:

Stop



Item Name: Plate

Start Date: 4/11/2011 Start Qty: 6.00



Cust Item ID:

Required Date: 4/15/2011 Req'd Qty: 6.00



Customer:

Reference:

Run Start



Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

120

QC8- Inspect parts - second check

0.00



QC

Memo

0.00

Quality Control

m 11 04 15 (6)

130

Form as per dwg

0.00



Brake NC

Memo

0.00

Brake NC

SB 4/10/11

(6)

140

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

Sulavio

(6)

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 68302**

Monday, April 11, 2011 1:20:04 PM



Page 3

Item ID: D4154-1

Accept



Setup Start



Revision ID:

Stop



Item Name: Plate

Start Date: 4/11/2011 Start Qty: 6.00



Cust Item ID:

Required Date: 4/15/2011 Req'd Qty: 6.00



Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

150

Identify as per dwg & Stock Location: *W/H*

0.00



Packaging

Memo

*025*

0.00

Packaging

*EL**11-5-3*

160

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

*11/5/11* *[Signature]**MF**11-05-11*

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Monday, April 11, 2011 1:20:10 PM

Page 1

Work Order ID: 68302

Parent Item: D4154-1

Parent Item Name: Plate



Start Date: 4/11/2011

Required Date: 4/15/2011

Start Qty: 6.00

Required Qty: 6.00

Comments: IPP Rev:A 10.08.03 new issue DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

M304S18GA		Purchased	No			100	sf	204.0000	4.2697	26.96653			
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304/316 .050 Sheet



B11-4-14

Location

Loc Qty

Loc Code

MAT020

204

111743

1

112178

4

113062

18

116135

48

116604

37

116979

96

116979

6

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

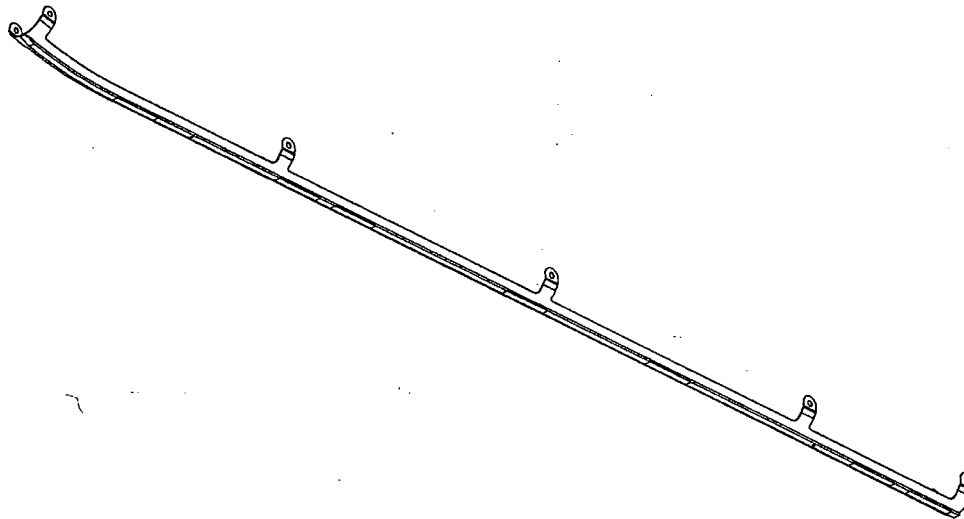
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



ITEM	QTY -041	P/N	DESCRIPTION
	X	D4154-041	WEARPLATE ASSEMBLY
1	1	D4154-1	PLATE
2	1	D4155-1	BAR
3	A/R	2059B	HARDCOAT
4	A/R	PR 1422	SEALANT (SEE NOTE 11, SHT 2)



**D4154-041 WEARPLATE ASSEMBLY**

**RELEASED**  
2010-09-15  
**UNDER REVIEW**  
11-04-09  
PAQ 11-72

A	NEW ISSUE	SC	10.07.22
REV.	DESCRIPTION	BY	DATE
DESIGN	SC	<b>DART AEROSPACE USA, INC.</b>	
DRAWN	SC	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		D4154	SHEET 1 OF 3
APPROVED		TITLE	SCALE
DE APPR.		<b>WEARPLATE ASSEMBLY</b>	NTS
DATE	10.07.22	<small>COPYRIGHT © 2010 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

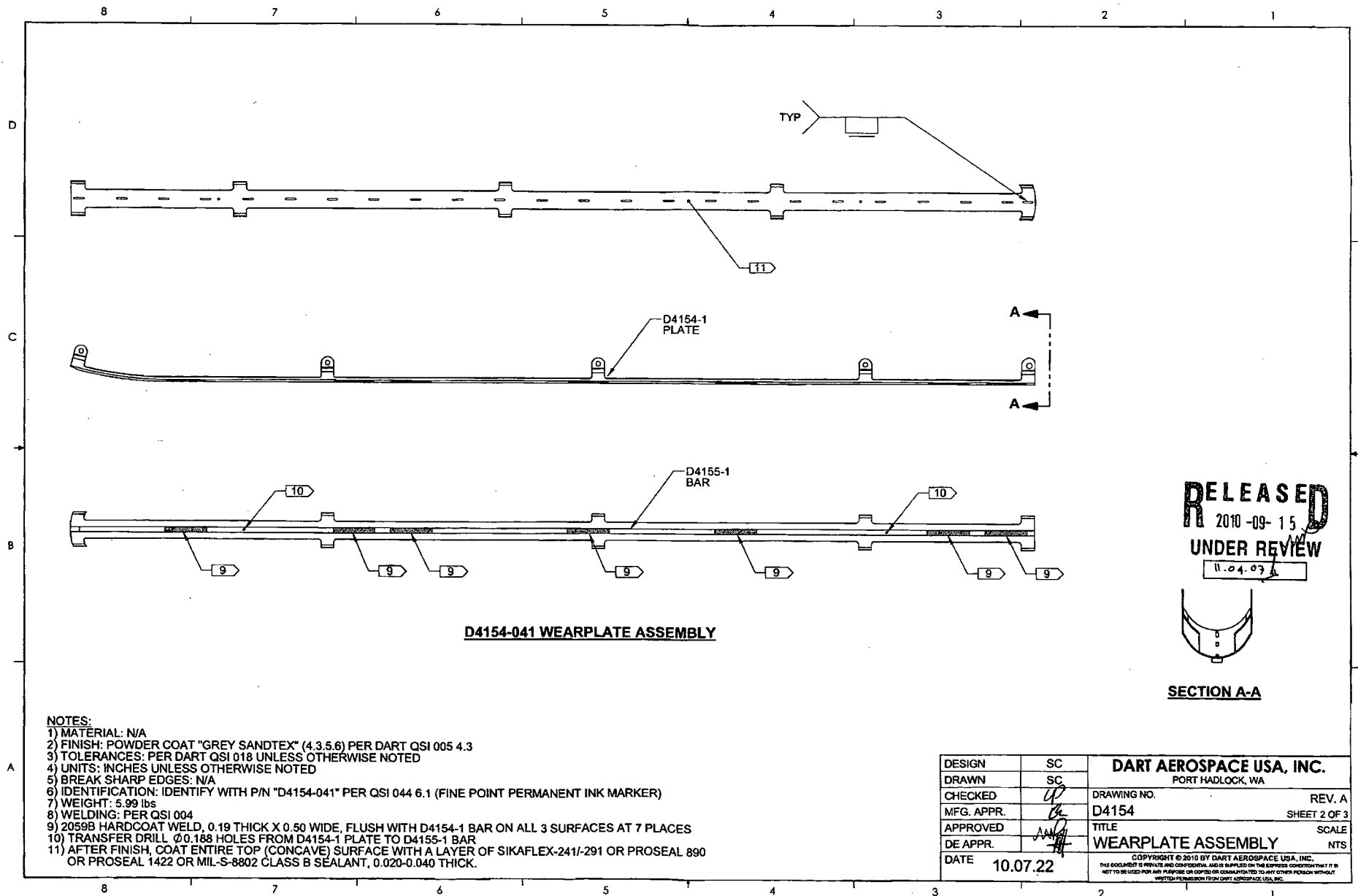
W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



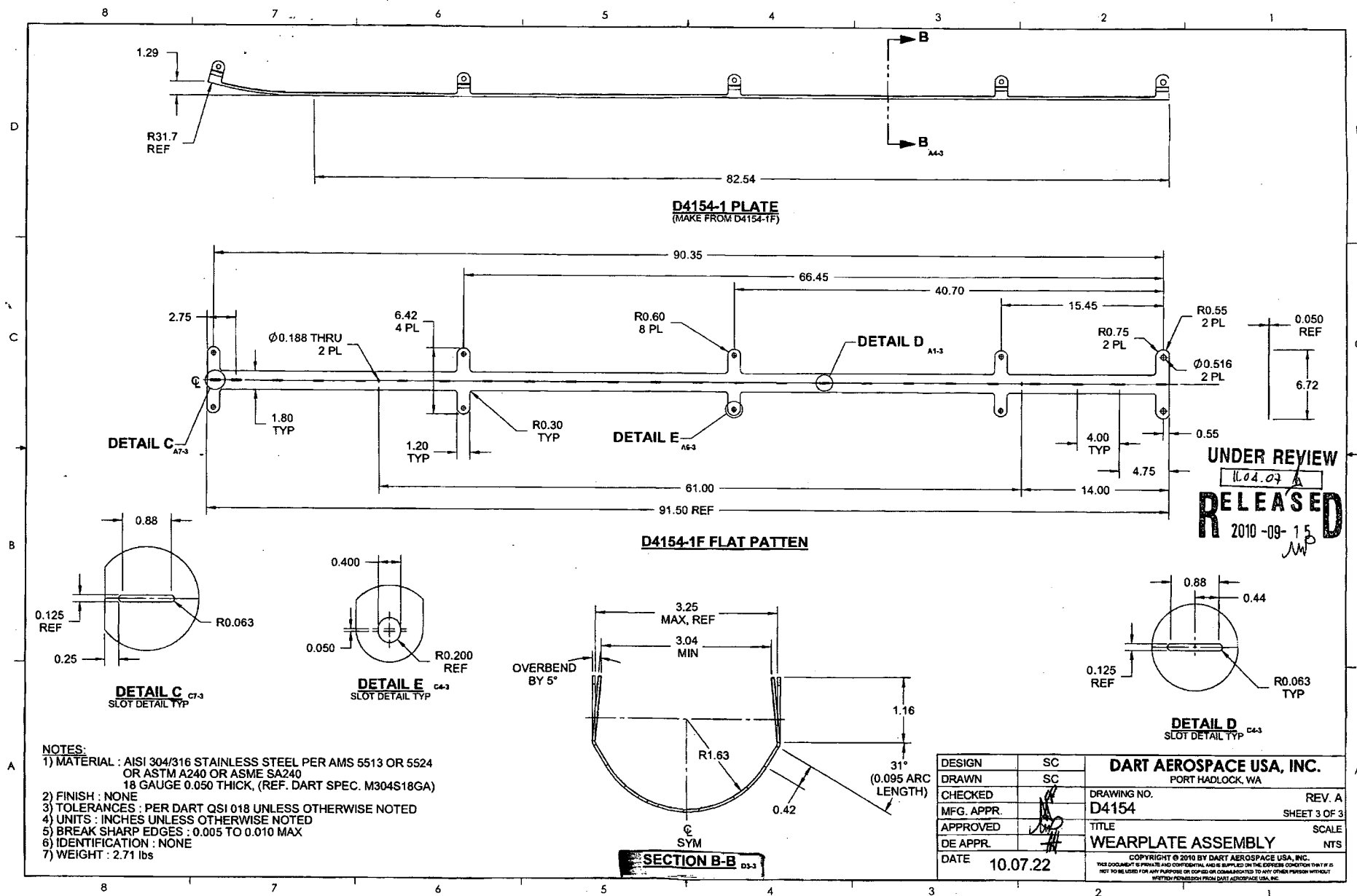
W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



UNDER REVIEW  
1104.07  
RELEASE  
2010-09-15

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

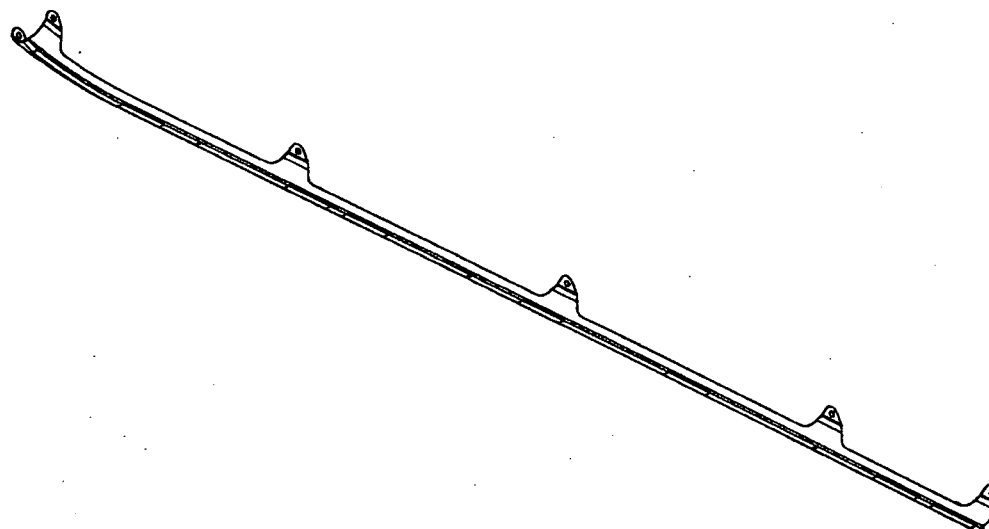
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

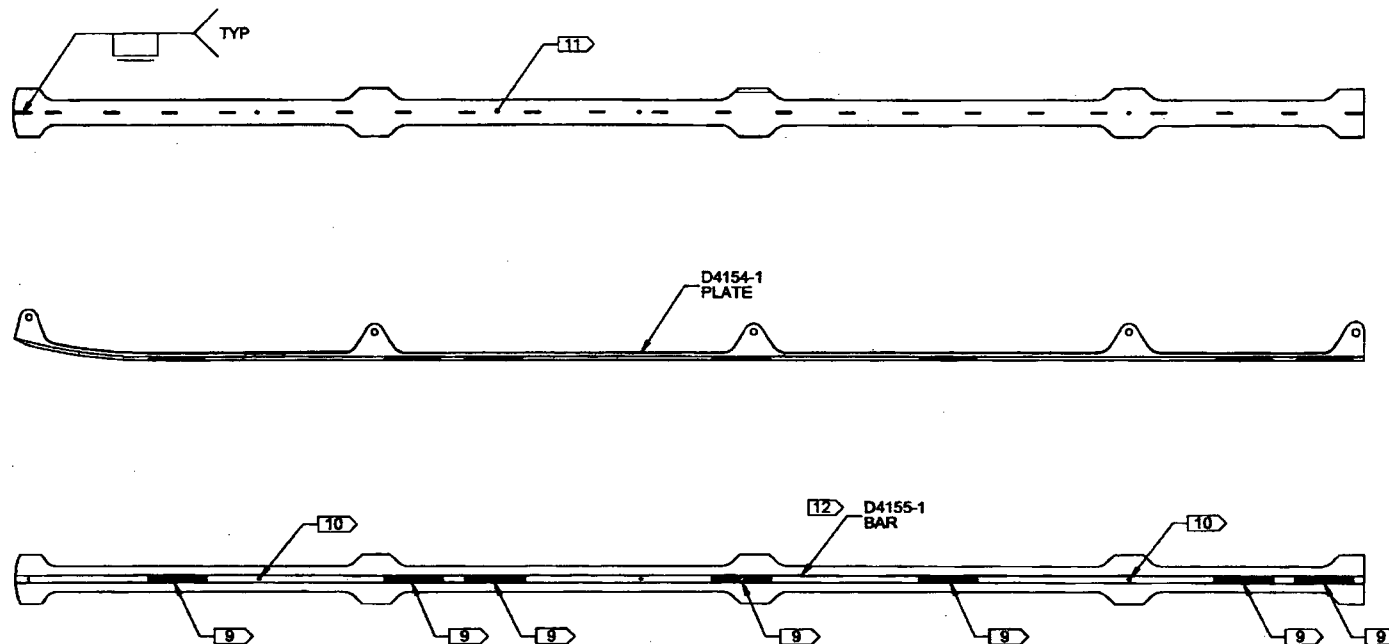
ITEM	QTY -041	P/N	DESCRIPTION
	X	D4154-041	WEARPLATE ASSEMBLY
1	1	D4154-1	PLATE
2	1	D4155-1	BAR
3	A/R	2059B	HARDCOAT
4	A/R	4714	PLUS ONE ROCKGUARD (SEE NOTE 11, SHT 2)



**D4154-041 WEARPLATE ASSEMBLY**

**RELEASED**  
2011-04-12

B	ITEM 4 WAS PR1422 (D3-1); REMOVED FINISH TO NOTE 2 (A8-2); REMOVED SECTION A-A (NO LONGER REQUIRED); REVISED D4154-1F	MB	11.04.05
A	NEW ISSUE	SC	10.07.22
REV.	DESCRIPTION	BY	DATE
DESIGN	SC	<b>DART AEROSPACE USA, INC.</b> PORT HADLOCK, WA	
DRAWN	SC	DRAWING NO.	REV. B
CHECKED	WJ	D4154	SHEET 1 OF 3
MFG. APPR.	AD	TITLE	SCALE
APPROVED	WJ	WEARPLATE ASSEMBLY	NTS
DE APPR.	WJ	<small>COPYRIGHT © 2011 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS UNCLASSIFIED AND IS RELEASED ON THE BASIS OF THE NATIONAL ARCHIVES ACT OF 1966 AND IS NOT TO BE USED FOR ANY PURPOSES OR COPIED OR REPRODUCED IN ANY FORM OR BY ANY MEANS WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	
DATE	11.04.05		



**D4154-041 WEARPLATE ASSEMBLY**

**RELEASED**  
2011-04-13

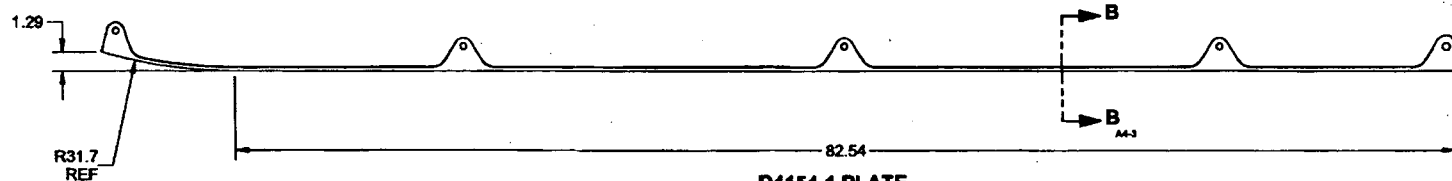
**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH P/N "D4154-041" PER QSI 044 6.1 (FINE POINT PERMANENT INK MARKER)
- 7) WEIGHT: 6.88 lbs
- 8) WELDING: PER QSI 004
- 9) 2059B HARDCOAT WELD, 0.19 THICK X 0.50 WIDE, FLUSH WITH D4154-1 BAR ON ALL 3 SURFACES AT 7 PLACES
- 10) TRANSFER DRILL  $\phi 0.188$  HOLES FROM D4154-1 PLATE TO D4155-1 BAR
- 11) COAT ENTIRE TOP (CONCAVE) SURFACE WITH A LAYER OF PLUS ONE ROCKGUARD 4714, 0.020-0.040 THICK
- 12) FORM TO MATCH PROFILE OF D4154-1 AT TIME OF WELDING

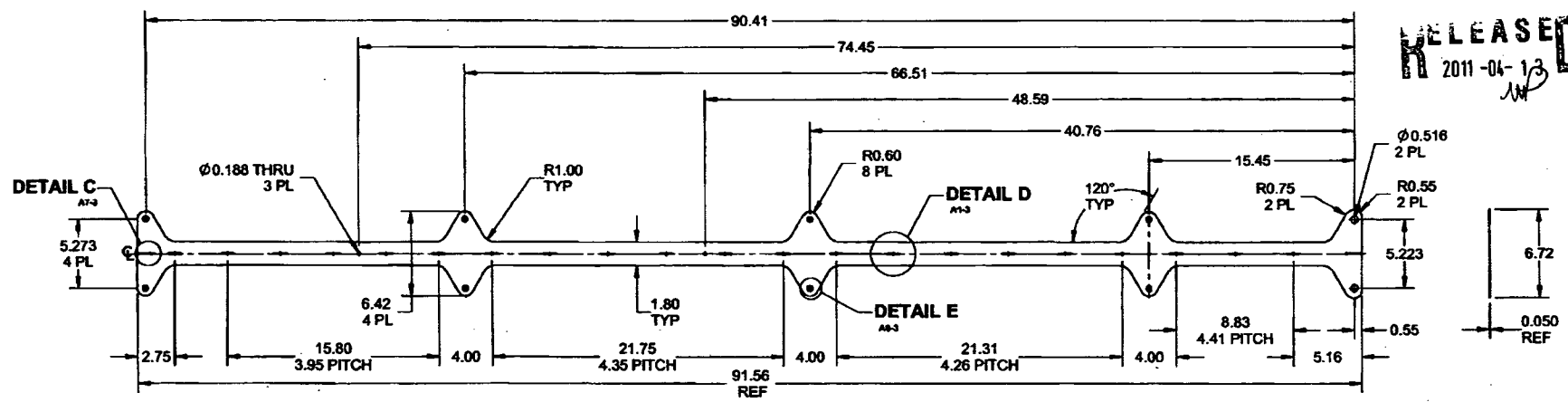
DESIGN	SC	DART AEROSPACE USA, INC.	
DRAWN	5	PORT HADLOCK, WA	
CHECKED	CP	DRAWING NO.	REV. B
MFG. APPR.	11/11	D4154	SHEET 2 OF 3
APPROVED	11/11	TITLE	SCALE
DE APPR.	11/11	WEARPLATE ASSEMBLY	NTS
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8 7 6 5 4 3 2 1

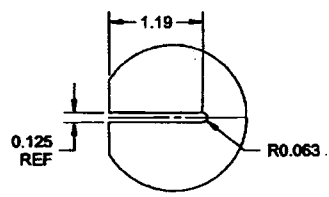


**D4154-1 PLATE**  
(MAKE FROM D4154-1F)

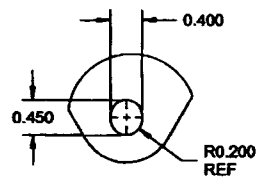


**RELEASED**  
H 2011-04-13

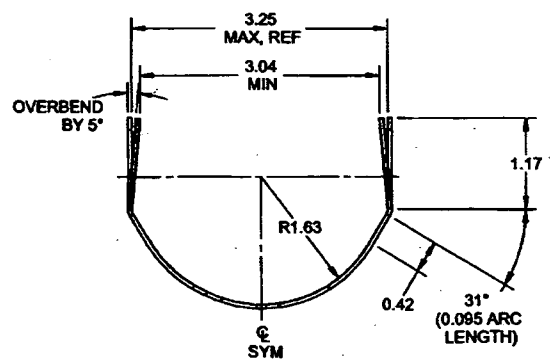
**D4154-1F FLAT PATTERN**



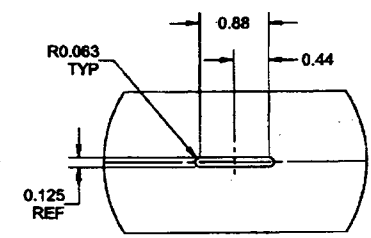
**DETAIL C**  
END SLOT DETAIL, 2 PL



**DETAIL E**  
SLOT DETAIL TYP



**SECTION B-B**



**DETAIL D**  
SLOT DETAIL TYP

- NOTES:**
- 1) MATERIAL : AISI 304/316 STAINLESS STEEL PER AMS 5513 OR 5524 OR ASTM A240 OR ASME SA240 18 GAUGE 0.050 THICK, (REF. DART SPEC. M304S18GA)
  - 2) FINISH : NONE
  - 3) TOLERANCES : PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS : INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK SHARP EDGES : 0.005 TO 0.010 MAX
  - 6) IDENTIFICATION : NONE
  - 7) WEIGHT : 2.95 lbs

DESIGN	SC	<b>DART AEROSPACE USA, INC.</b>	
DRAWN		PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		<b>D4154</b>	SHEET 3 OF 3
APPROVED		TITLE	SCALE
DE APPR.		<b>WEARPLATE ASSEMBLY</b>	NTS
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8 7 6 5 4 3 2 1

DART AEROSPACE LTD		Work Order: 68302
Description: PLATE		Part Number: D4154-1
Inspection Dwg: D4154-1, Rev: B		Page 1 of 1

### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☒ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
.400	±.010	.401	✓		V MB2	
.450	±.010	.452	✓		V	
.125	±.010	.125	✓		V	
.88	±.030	.88	✓		V	
1.19	±.030	1.186	✓		V	
5.273	±.010	5.271	✓		V	
2.75	±.030	2.75	✓		T MB01	
15.80	±.030	15.80	✓		V	
3.95	±.030	3.946	✓		V	
4.00	±.030	4.00	✓		V	
6.42	±.030	6.433	✓		V	
21.75	±.030	21.75	✓		T	
4.35	±.030	4.351	✓		V	
1.80	±.030	1.810	✓		V	
21.31	±.030	21.31	✓		T	
4.26	±.030	4.26	✓		V	
8.83	±.030	8.83	✓		T	
5.16	±.030	5.16	✓		V	
.55	±.030	.55	✓		V	
91.56	±.030	91.56	✓		T	
90.41	±.030	90.41	✓		T	
74.45	±.030	74.45	✓		T	
66.51	±.030	66.51	✓		T	

Measured by: RB	Audited by: <i>[Signature]</i>	Prototype Approval:
Date: 11-4-14	Date: 11-04-15	Date:

Rev	Date	Change	Revised by	Approved
A		New Issue	KJ/JLM	

DART AEROSPACE LTD	Work Order:	68302
Description: PLATE	Part Number:	D4154-1
Inspection Dwg: D4154-1, Rev: B		Page 1 of 1

# FIRST ARTICLE INSPECTION CHECKLIST

X	First Article
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x	Prototype
---	-----------

[illegible]

Measured by: <u>RS</u>	Audited by: <u>[Signature]</u>	Prototype Approval:
Date: <u>11-4-14</u>	Date: <u>11-04-15</u>	Date:

Rev	Date	Change	Revised by	Approved
A		New issue	KJ/JLM	

